

U.S. AIR FORCE STORM WATER POLLUTION PREVENTION PLAN

Peterson Air Force Base



Revised 29 February 2016

STORM WATER POLLUTION PREVENTION PLAN PETERSON AIR FORCE BASE, CO

About This Plan

This installation-specific Environmental Management Plan (EMP) is based on the U.S. Air Force's (AF) standardized Storm Water Pollution Prevention Plan (SWPPP) template. This plan is not an exhaustive inventory of all storm water requirements and practices. Where applicable, external resources, including Air Force Instructions (AFIs); AF Playbooks; federal, state, local, and country specific Final Governing Standards (FGS) or Overseas Baseline Guidance Documents (OEBGD); and permit requirements, as applicable, are referenced.

Each section of this SWPPP begins with standardized, AF-wide "common text" language that addresses AF, Department of Defense (DoD), and federal requirements, including the EPA General Permit. This common text language is restricted from editing to ensure that it remains standard throughout all plans. The common text language is maintained and updated by the designated Office of Primary Responsibility (OPR) with assistance from the Office of Collateral Responsibility (OCR), as appropriate. Immediately following the AF-wide common text sections, are Installation sections. The Installation sections contain installation-specific content to address state, local, and installation-specific requirements. Installation sections are unrestricted and are maintained and updated by installation or Installation Support Team (IST) personnel.

This document is optimized to be accessed and viewed electronically. The eDASH website at <https://cs1.eis.af.mil/sites/edash/> is the primary communication tool for AF EMPs.

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CERTIFICATION

This section contains the certification, signed by the appropriate Responsible Official. Insert scanned document in to this section, or insert the statement prescribed by the regulator below.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained herein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Responsible Official Certification

Printed Name: _____

Date: _____

Signature: _____

Title: _____

DOCUMENT CONTROL

[illegible]

Review Date	Review Participants	Notes/Remarks	Results in Plan Update (Yes or No)

Version Number	Description	Date

STORM WATER POLLUTION PREVENTION PLAN

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1.0 OVERVIEW AND SCOPE

This SWPPP specifies how installation personnel prevent discharges to storm water of potential pollution from industrial operations. It contains procedures intended to minimize the risk of industrial storm water pollution in drainage areas located within the installation's boundaries. The SWPPP describes installation:

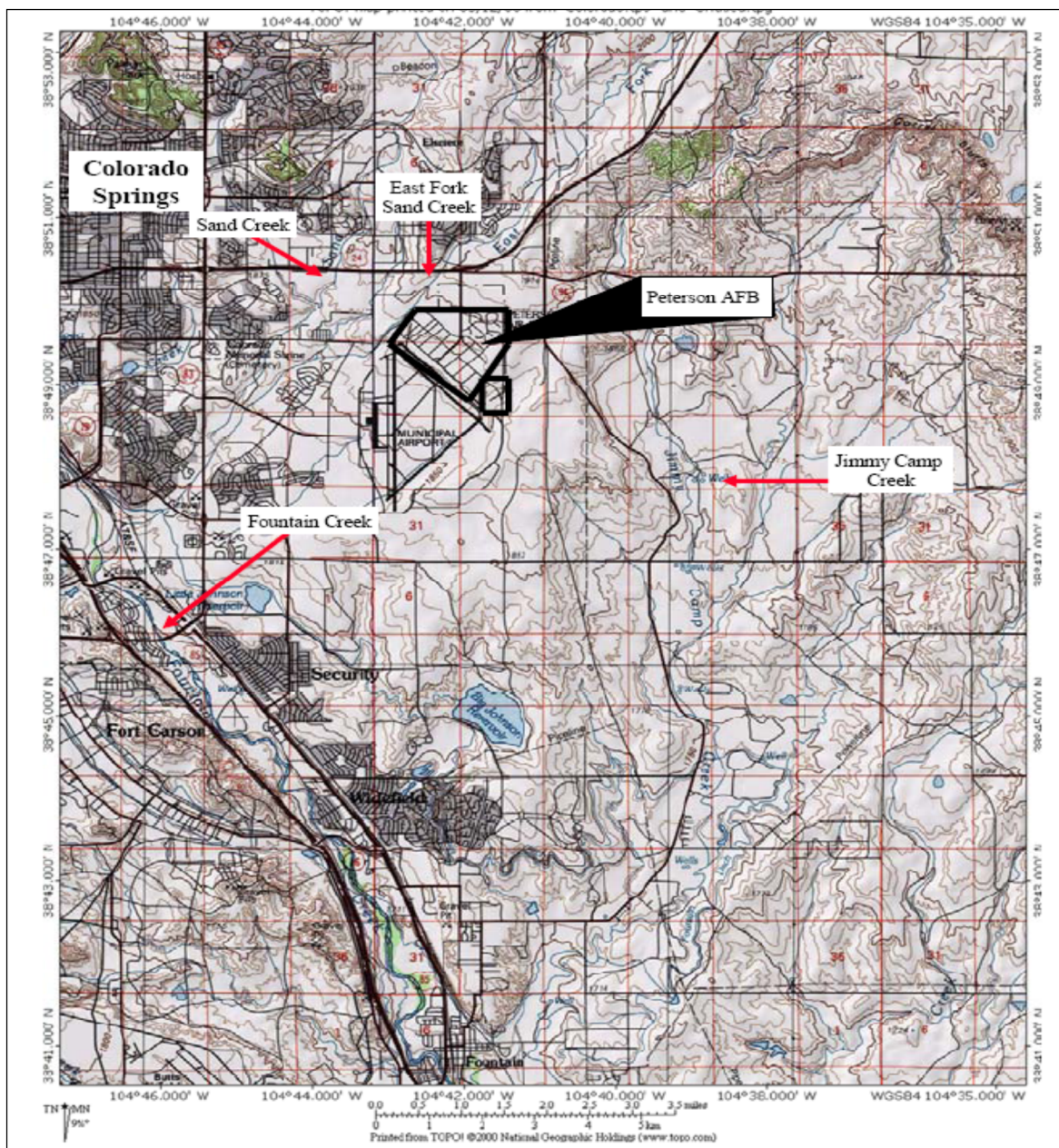
- Identification and evaluation of activities and potential storm water pollution sources
- Identification and implementation of storm water Best Management Practices (BMPs)
- Pollution reduction measures and procedures
- Monitoring and inspection procedures

The installation Storm Water Pollution Prevention Team (SWPPT) is responsible for developing, implementing, and managing the SWPPP.

Installation Supplement – Overview and Scope

Peterson AFB is located adjacent to the Colorado Springs Airport (COS) on approximately 1,277 acres near the City of Colorado Springs, El Paso County, Colorado. A vicinity map showing the Base and surrounding area is provided in Figure 1. The 21st Space Wing (SW) is the host unit for Peterson AFB. The 21st SW's mission is to provide and employ global capabilities to ensure space superiority to defend our nation and allies. The 21st SW, headquartered at Peterson AFB, is the Air Force's only organization providing missile warning and space control to unified commanders and combat forces worldwide. The 21st SW provides missile warning and space control to U.S.-Canadian North American Aerospace Defense Command (NORAD) and U.S. Strategic Command through a network of command and control units and ground based sensors operated by geographically separated units around the world. In addition to the 21st Space Wing, Peterson AFB is home to NORAD, Northern Command, United States Space Command, United States Northern Command (USNORTHCOM), Air Force Space Command, and the 302nd Airlift Wing. The 302nd Airlift Wing operates and maintains the aircraft assigned to Peterson AFB.

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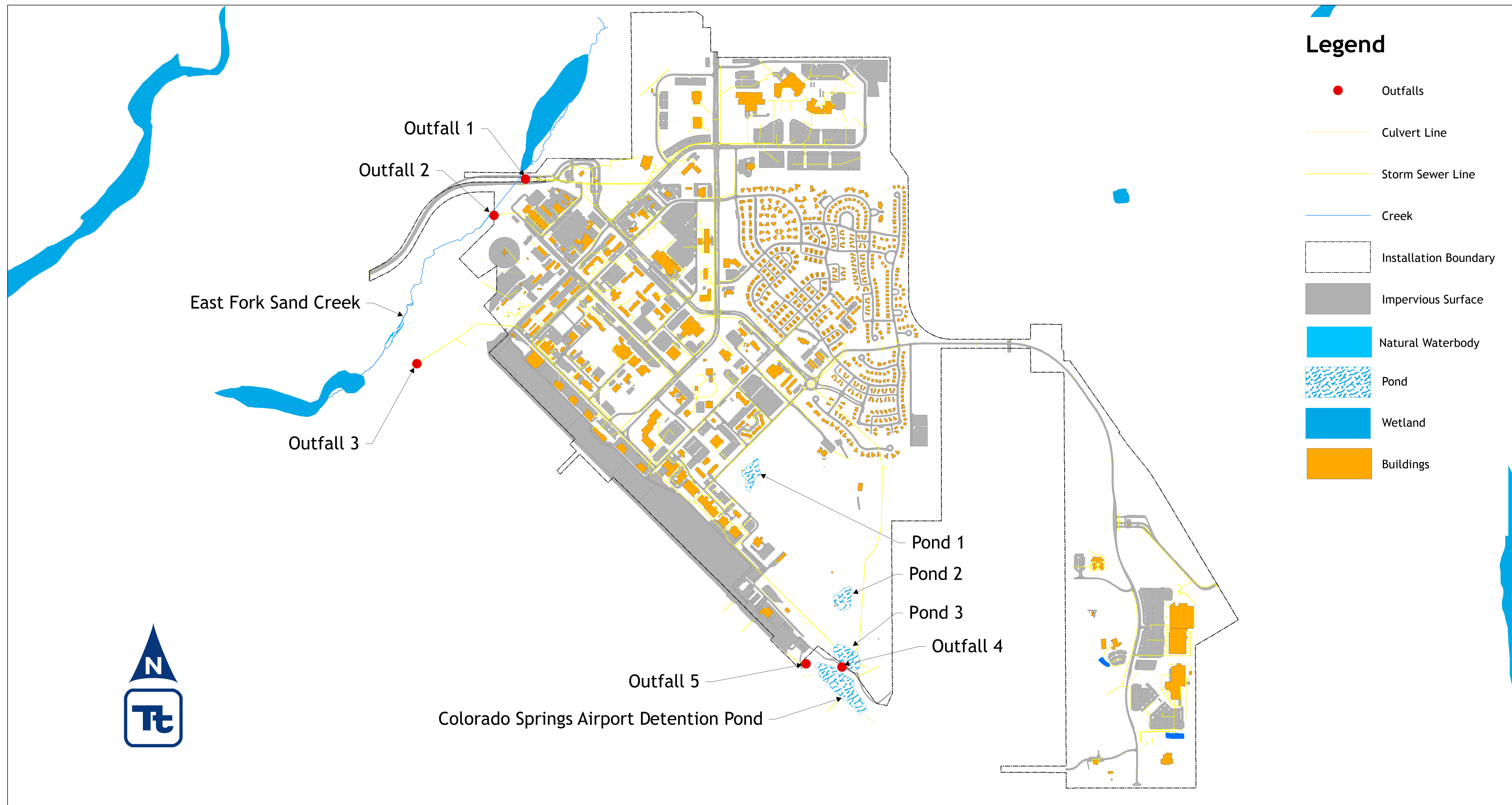


Source: Peterson AFB, 2006

Figure 1
Peterson AFB General Location Map

Outfall and Receiving Water Description

There are five outfalls on Peterson AFB that discharge storm water from regulated industrial areas of Peterson AFB. These five outfalls discharge storm water to two receiving water bodies including: 1. East Fork of Sand Creek and 2. COS Detention Pond No.2 which ultimately discharges to an unnamed tributary of Fountain Creek. Each of the outfalls and associated drainage areas are shown in Figure 2 and individually discussed below.



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0 250 500 1,000 1,500 2,000 Meters

0 500 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

Peterson Air Force Base, CO Storm Water Pollution Prevention Plan Site Map

NAD 1983 State Plane Colorado Central FIPS 0502 Feet
Map produced 10-06-2015

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Outfalls 001, 002, and 003 drain relatively small areas and all discharge directly to the East Fork of Sand Creek. The East Fork of Sand Creek naturally flows during the spring season or immediately following precipitation events. Sand Creek flows in a southwesterly direction along the north and west boundaries of Peterson AFB, passing just to the north of the end of the 17R/35L runway. Previously, effluent from the Cherokee Water District's municipal wastewater treatment plant, which is located immediately upstream (north) of Peterson AFB, discharged to the East Fork of Sand Creek on a continual basis. However, this municipal wastewater treatment plant hasn't operated for several years and the stream is dry except during runoff events. Outfall 001 is the most upstream (north) discharge point and is located just to the north of the West Entrance Guard Station. Outfalls 002 and 003 are located downstream of Outfall 001. Activities in these drainage areas are primarily commercial and administrative in nature.

The Outfall 004 drainage area is the largest on the installation and includes regulated industrial operations including flight line and aircraft maintenance support facilities. Additional land uses in this drainage area include residential and commercial. The storm sewer collection system servicing this drainage area discharges to Pond 3. Pond 3 is located at the south end of the installation's golf course. Storm water collected in Pond 3 can be directed to fill golf course Pond 1 or Pond 2 or as irrigation for the golf course grounds. Water not used by the golf course is allowed to evaporate. Pond 3 is equipped with an overflow spillway, which directs overflow to the COS Detention Pond No. 2, located southwest of Pond 3. The spillway to the COS Detention Pond No. 2 is the designated outfall (Outfall 004). Discharges from Pond 3 to COS Detention Pond No. 2 at Outfall 004 are rare and only occur when Pond 3 exceeds full capacity. If a significant storm event occurs, COS Detention Pond No. 2 will discharge to the COS storm water system, which is hydraulically connected to the Fountain Creek drainage basin via a concrete lined channel exiting the airport to the west.

Outfall 005 also discharges to COS Detention Pond No. 2. The Outfall 005 drainage area consists primarily of storm water from the aircraft parking apron and other airfield pavements. Industrial operations associated with this drainage area include the Engine Test Stand, aircraft refueling, and aircraft deicing fluid storage.

The Pete East Drainage Area is located on the eastern portion of the installation and consists of commercial and administrative areas including the Base Exchange, Commissary, Dental Clinic, and Area Dental Laboratory. Most of the storm water that falls in this drainage area is conveyed to the Pete East Detention Pond, which does not have an outfall structure. A small portion of storm water that falls on Pete East, primarily from roadways, is conveyed to a drainage ditch at Marksheffel Road and the East Gate access road. Building 2032 Fire Department Substation is the only air transportation related industrial activity located within the Pete East drainage area; however, all storm water from this facility is currently conveyed to the Pete East Detention Pond which does not discharge.

All receiving waters around Peterson AFB are ultimately conveyed to Fountain Creek. Fountain Creek and all tributaries are classified as impaired for *Escherichia Coli* (E.coli) in the 2012 State of Colorado 303(d) list. According to the State of Colorado 2012 303(d) list, a total maximum daily load (TMDL) is needed for this watershed.

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2.0 INSTALLATION PROFILE

Scope of Plan	Peterson Air Force Base, Installation Wide
Facility Operator	Department of the Air Force – Peterson Air Force Base (AFB) Office Symbol: 21 Space Wing (21st SW) Address: 580 Goodfellow Street City, State, Zip Code: Peterson AFB, CO 80914 Telephone Number: 719-556-7305
Office of Primary Responsibility (OPR)	21st Civil Engineer Squadron Installation Management Flight, Environmental Element (21 CES/CEIE) has overall responsibility for implementing SWPPP and is the lead organization for monitoring compliance with applicable federal, state, and local storm water regulations
Responsible Official/Legally Responsible Person	Office Symbol: 21 SW/CC Name: Douglas A. Schiess, Colonel USAF Commander, 21st Space Wing Telephone Number: 719-556-2100
Water Quality Program Manager (SWPPP Contact)	Name: Sylvette Rivera-Eliza Name: Water Quality Program Manager Telephone Number: 719-556-1410 Email address: Sylvette.rivera-eliza@us.af.mil
Permitting Authority	Federal Environmental Protection Agency (EPA) EPA Region 8
Permit Type	General
Permit Number/Permit Tracking Number	COR05F000 Permit Tracking Number: COR05F001
Permit Expiration Date	4 June 2020
SIC Code(s)	4581 for Regulated Industrial Activities
NAICS Code(s)	488119
General Location Map	Figure 1 Peterson AFB General Location Map
Site Map	Figure 2 Peterson AFB Site Map
Applicable Federal and AF regulatory references	Federal: Clean Water Act (CWA) EPA 2015 Multi-Sector General Permit For Storm water Discharges Associated With Industrial Activity Air Force: AFI 32-1067
Applicable State and local regulatory references	State and Local: Not Applicable, EPA Region 8 is the CWA regulatory authority for Federal Facilities in Colorado

3.0 ENVIRONMENTAL MANAGEMENT SYSTEM

The AF environmental program adheres to the Environmental Management System (EMS) framework and its Plan, Do, Check, Act cycle for ensuring mission success. Executive Order 13693, U.S. Department of Defense Instruction (DODI) 4715.17, AFI 32-7001, and international standard, ISO 14001:2004, provide guidance on how environmental programs should be established, implemented, and maintained to operate under the EMS framework.

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The storm water program employs EMS-based processes to achieve compliance with all legal obligations and current policy drivers, effectively managing associated risks, and installing a culture of continuous improvement. The SWPPP serves as an administrative operational control that defines compliance-related activities and processes.

4.0 GENERAL ROLES AND RESPONSIBILITIES

The SWPPP requires the full involvement of all organizations and personnel on the installation, including contractors, tenants, and family members living on base. The major roles/organizations involved in supporting the SWPPP at a typical installation include:

- Installation Commander
- Base Civil Engineer
- Environmental Element Chief
- Water Quality Program Manager
- Storm Water Pollution Prevention Team (identified below)
- Installation Personnel
- Air Force Civil Engineer Center (AFCEC)
- Unit Environmental Coordinator (UEC, see AFI 32-7001)

SWPPP Team members are identified by name or title, along with their individual responsibilities, in the Installation Supplement below.

Additional organizational and personnel roles and responsibilities are described throughout this SWPPP and in referenced documents. Detailed information about typical SWPPP responsibilities is available in the Water Quality Playbook and AFI 32-1067. Additional installation-specific roles and responsibilities are documented in the BMPs below.

Installation Supplement – General Roles and Responsibilities

The Peterson AFB Storm Water Pollution Prevention Team (SWPPT) is responsible for developing, implementing, maintaining, and revising this SWPPP to ensure storm water pollution is minimized and MSGP requirements are met. The SWPPT reports to the Environmental, Safety and Occupational Health Council (ESOHC), the Peterson AFB executive steering group for environmental, safety, and occupational health matters. The SWPPT will update the ESOHC concerning this SWPPP and storm water pollution prevention issues as appropriate. The following Peterson AFB staff comprises the SWPPT.

21 CES/CEIE

Title: Water Program Manager

Responsibilities: Serves as the SWPPT Leader. The Water Quality Manager has the primary responsibility for maintenance and administration of the SWPPP. The Water Quality Program Manager will oversee implementation of the SWPPP and maintain SWPPP records required by the MSGP.

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21 CES/CEIE	Title: Chief, Environmental Quality Responsibilities: Advocates for and approves environmental projects/activities required to implement this SWPPP.
302 LRS/LRGT	Title: 302 Airlift Wing Environmental Manager Responsibilities: Represent aircraft maintenance organizations in regards to SWPPP development and implementation. Advise the SWPPT of changes to industrial operations related to aircraft maintenance and operations, including deicing operations and washing.
21 LRS/LRV	Title: Transportation Environmental Manager Responsibilities: Represent fuel management, vehicle maintenance and vehicle operation organizations in regards to SWPPP development and implementation. Advise the SWPPT of changes in vehicle maintenance and operations.
21 CES/CEO	Title: Municipal and Airfield Civil Works Responsibilities: Represent airfield pavement and snow removal organizations in regards to SWPPP development and implementation. Advises the SWPPT of changes to industrial operations including storm water conveyance system maintenance projects and changes in airfield deicing operations. Also responsible for maintaining structural Best Management Practices (BMPs) on the installation.
21 CES/CENB	Title: Program Development Responsibilities: Represent planning and development organization on base in regards to SWPPP development and implementation. Advise the SWPPT of upcoming facility and infrastructure projects that may include potential storm water pollutants and identify planned structural storm water BMPs for future development.
21 CES/CEIE Support Contractor	Title: Fence to Fence Environmental Support Contractor Responsibilities: Perform and document facility inspections, impaired waters monitoring, and quarterly visual monitoring in accordance with the 2015 MSGP.
21 CES/CENM	Title: Chief, Technical Support Responsibilities: Provide as-needed mapping/technical support to the SWPPT.
21 SW/JA	Title: Judge Advocate Office Responsibilities: Provide as-needed legal support to the SWPPT.
21 SW/PA	Title: Public Affair Office Responsibilities: Provide as-needed public outreach support to the SWPPT.

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At a minimum, the SWPPT will meet annually to review SWPPP implementation within each organization and determine if any SWPPP or BMP changes are required within each organization. The SWPPT Leader will determine the meeting format. The SWPPT Leader may choose to conduct meetings with individual SWPPT members to coincide with other SWPPP activities, such as the quarterly facility inspections or annual report generation.

SWPPP Maintenance and Updates

This SWPPP is a “living” document and will be periodically reviewed and updated. This SWPPP will be reviewed at least annually, but more frequent reviews maybe required if operational changes or inspection results dictate. This SWPPP will be updated whenever one of the following activities occur:

- There is a change in design, construction, operation, or maintenance at Peterson AFB which has a significant effort on storm water discharge, or potential for discharge, of pollutants from Peterson AFB.
- There is an unauthorized release or discharge discovered.
- Visual assessments indicate obvious signs of storm water pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).
- Inspection, monitoring, or investigation by Peterson AFB personnel, Local, State or Federal officials, determines that this SWPPP is ineffective in eliminating or significantly minimizing pollutants. If any of the facility investigations indicates that a SWPPP modification is required, the SWPPP must be updated within 14 calendar days of completion of the corrective action.
- The EPA Director notifies Peterson AFB in writing that the SWPPP does not meet one of more of the minimum requirements of the 2015 MSGP. Changes required by the EPA Director must be incorporated into the SWPPP and implemented within 30 days of receipt of the notification.

The SWPPP must be certified and signed by the Installation Commander or Duly Authorized Representative of this individual.

5.0 TRAINING

The installation implements storm water training programs to ensure that base personnel, contractors, and visitors are aware of their roles in the program and the importance of their participation to its success. DoDI 4715.10, *Environmental Education, Training, and Career Development*, implements policy and provides the procedures for environmental education, training, and career development programs for DoD personnel. The installation ensures that appropriate personnel complete required education, training, and certification necessary to perform their jobs. Priority is given to the use of AF-approved education/training sources such as AFIT training courses and official AF-approved computer-based training resources (e.g., ESOH-TN, ADLS, ArcNet, etc.) to meet training needs.

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Specific training requirements are outlined in Employee Training Control Measure in Section 7 below. Training records are maintained IAW the Recordkeeping and Reporting section of this plan.

Installation Supplement – Training

Peterson AFB implements a comprehensive environmental training program for installation personnel to avoid pollution through preventive measures and, in the event of a pollutant release, to react according to ensure the safety of personnel and protection of the environment. The following training programs have been implemented at Peterson AFB and support the overall storm water management program:

- Industrial Storm Water Pollution Prevention Training is provided at least once per year to all personnel associated with implementing this SWPPP including members of the SWPPT and employees working in industrial areas who are responsible for implementing storm water BMPs. The Industrial Storm Water Pollution Prevention Training includes the overall goals of the Peterson AFB industrial storm water program, the components of this SWPPP, and storm water BMPs. The Peterson AFB Water Quality Manager is responsible for developing and facilitating the Industrial Storm Water Pollution Prevention Training program. The current Industrial Storm Water Pollution Prevention Training materials are included as Appendix F of this SWPPP. Logs of specific dates in which individual employees received training are maintained within the employee's work center and compiled at least annual for recordkeeping with this SWPPP.
- Hazardous Waste Management Training is provided to all Peterson AFB personnel whose job entails working with hazardous waste or who are exposed to hazardous wastes as required by EPA, Occupational Safety and Health Administration (OSHA) and Colorado regulations. The Air Force hazardous waste training program is dependent on employee responsibilities, but generally includes the following topics:
 - Identification of hazardous waste,
 - Accumulation point management,
 - Container use, marking and labeling, and on-site transportation,
 - Waste turn-in procedures,
 - Manifesting and transportation of hazardous waste, and
 - Personnel safety and health and fire safety.

This training supports the overall storm water program by providing proper hazardous material management, storage, and spill response procedures. The Peterson AFB Hazardous Waste Management Plan specifies who must receive hazardous waste training. Hazardous Waste Management Training is provided at least once per year by the Peterson AFB Hazardous Waste Manager, who also maintains the attendance roster and current training materials.

- Comprehensive Emergency Management Plan Training is provided to appropriate spill response personnel as specified in the Peterson AFB Comprehensive Emergency Management Plan. This training supports the industrial storm water program by clearly defining spill prevention and response procedures to minimize potential storm

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water and water quality impacts associated with a spill on Peterson AFB. The Peterson AFB Spill Manager maintains current training materials and attendance rosters for spill prevention and response training. This training is provided at least annually by the Peterson AFB Spill Manager.

- Spill Prevention, Control and Countermeasures Training is provided to appropriate oil handling and spill response personnel as specified in the SPCC Plan. This training supports the industrial storm water program by defining spill prevention and response procedures, methods for monitoring secondary containment structures, and container inspection requirements to minimize potential storm water and water quality impacts associated with a spill. The Peterson AFB Spill Manager provides this Spill, Prevention, Control, and Countermeasures training at least once per year and maintains current training materials and attendance rosters.

6.0 RECORDKEEPING AND REPORTING

The installation implements measures to ensure compliance with applicable permit recordkeeping and reporting requirements. Records are stored and maintained IAW Air Force Manual 33-363, *Management of Records*, and records are archived and disposed IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The installation complies with all permit reporting requirements.

The installation maintains the following inspection, monitoring, and certification records with the SWPPP. Overseas installations may have different requirements than the list below. When possible, a link to the electronic version of the record is made available in the references section of this plan.

- Copy of the Notice of Intent (NOI)
- Copy of the acknowledgement letter containing the permit tracking number;
- Copy of the permit
- Description and dates of any significant spills, leaks, or other releases. Note: the installation maintains this information in EASI, and a link is available in the references section of this SWPPP
- Employee training records
- Documentation of maintenance and repairs of control measures
- Inspection reports
- Documentation of deviations from the schedule for monitoring or assessments and the reason for the deviation
- Documentation of corrective actions taken
- Documentation of benchmark exceedances and how they were responded to
- Documentation to support determination that pollutants of concern are not expected to be present above natural background levels if water is discharged directly to impaired waters

Additional state, local, or host nation recordkeeping and reporting requirements are described in the Installation Supplement, as necessary.

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Installation Supplement – Recordkeeping and Reporting

The following recordkeeping and reporting procedures have been established at Peterson AFB to meet the requirements of the 2015 MSGP.

- Appendix A shows the Peterson AFB SWPP Team, contact information, and meeting minutes.
- Appendix B contains the significant spills list and significant spill location map for Peterson AFB. This appendix will be updated as required throughout the permit if significant spills occur on Peterson AFB. Significant spills are defined as spills that exceed a Reportable Quantity established by Federal and State of Colorado regulations which require regulatory notification.
- Appendix C contains a copy of the Peterson AFB NOI; information utilized to complete the NOI; Acknowledgement Letter containing the permit tracking number; and delegation letters for duly authorized representatives. Endangered Species Act and Critical Habitat Protection evaluation completed as part of the Peterson AFB NOI submittal
- Appendix D contains a copy of the 2015 MSGP.
- Appendix E contains detailed site maps of Peterson AFB as well as additional information on individual industrial operations and facilities.
- Appendix F contains the Industrial Storm Water Pollution Prevention Training materials and completion logs.
- Appendix G contains Storm Water Sampling Results and Quarterly Visual Monitoring Reports. These reports must be certified and signed by a duly authorized representative. These reports must be retained with the SWPPP for at least 3 years from the date that permit coverage expires or is terminated. Reports are not required to be submitted to the EPA unless otherwise requested
- Appendix H contains copies of Discharge Monitoring Reports (DMRs) submitted to EPA.
- Appendix I contains Routine Facility Inspection Reports. These reports must be certified and signed by duly authorized representative. These reports must be retained for at least 3 years from the date that permit coverage expires or is terminated. Reports are not required to be submitted to the EPA unless otherwise requested. However, findings from facility inspection reports must be summarized in the annual report submitted to the EPA.
- Appendix J contains completed Corrective Actions Reports. These reports must be certified and signed by a duly authorized representative. These reports must be retained for at least 3 years from the date that permit coverage expires or is terminated. Reports are not required to be submitted to the EPA unless otherwise requested. However, corrective action details must be summarized in the annual report submitted to the EPA.
- Appendix K contains copies of submitted Annual Reports. These reports must contain the results or a summary of the past year's routine facility inspections and quarterly visual assessments performed at Peterson AFB; summaries of corrective actions taken, or the status of corrective actions in progress at the time of the Annual Report generation; and any incidents of noncompliance observed or, if there is no noncompliance, a certification stating the facility is in compliance with this permit. Annual Reports must be

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submitted electronically to the EPA by 30 January of each year of permit coverage. A blank copy of the Annual Report form required by EPA is included in Appendix K.

- Appendix L contains records pertaining to non-storm water discharge certification from previous investigations as well as additional investigations completed during this permit term, if required.
- Appendix M contains the Safety Data Sheets (SDS) and estimate of monthly usage for aircraft and airfield deicing chemicals as required for Sector S Air Transportation facilities.

As required by the 2015 MSGP, the SWPPP and all updates to the SWPPP must be in accordance with good engineering practices and to industry standards by a qualified person. The SWPPP and all reports required by the 2015 MSGP, must be certified and signed by a duly authorized representative. All reports and records required by the MSGP must be retained for at least 3 years from the date that permit coverage expires or is terminated. The SWPPP, all reports, forms, and documents required by the MSGP will include the following certification statement:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained herein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

7.0 PROCEDURES - STORM WATER POLLUTION PREVENTION PLAN

7.1 Potential Pollution Sources

Areas at the installation where industrial materials or activities are exposed to storm water are described in the Installation Supplement below.

Documentation of significant spills is maintained in the EASI database. A link to EASI is available in the references section of this plan, and necessary information may be maintained in an appendix.

Installation Supplement – Potential Pollution Sources

Industrial Activity Description

Peterson AFB is primarily engaged in airport and aircraft maintenance operations which are regulated industrial activities under the NPDES storm water program and covered by Sector S, Air Transportation of the 2015 MSGP. Air transportation related activities covered by Sector S include vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and deicing operations. Table 1 provides a summary of industrial activities on Peterson AFB, potential pollutant sources, and summary of control measures. Appendix E contains additional Confidential Business Information (CBI) for each MSGP regulated industrial facility and activity on Peterson AFB. Appendix E include facility site maps that depict potential pollutant sources exposed to storm water, flow direction, and facility specific controls.

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Table 1
Summary of Industrial Activities, Potential Pollutants, and Summary of Control Measures

Industrial Activity	Potential Pollutants	Summary of Control Measures (See Appendix E for specific locations and details)
Aircraft, Vehicle and Equipment Fueling	Oil & grease Diesel Gasoline Aviation Fuel Antifreeze Hydraulic Fluids Transmission Fluid Batteries	Fueling operations are conducted on an impervious surface Spill kits are kept on-site in close proximity to potential spill areas Personnel are trained in proper fueling procedures and spill clean-up methods Any spill will be cleaned-up immediately using dry clean-up methods
Aircraft, Vehicle and Equipment Washing	Oil & grease Diesel Gasoline Aviation Fuel Antifreeze Hydraulic Fluids Transmission Fluid Batteries Surfactants	Washing operations are conducted indoors and wash waters are sent to wastewater conveyance and disposal system
Aircraft Deicing	Propylene glycol Pavement deicers (complex chlorides, sodium chloride)	Personnel are trained in proper material management and application methods prior to applying chemical deicers Physical and mechanical methods are utilized to the maximum extent possible prior to chemical usage
Aircraft, Vehicle and Equipment Maintenance	Oil & grease Diesel Gasoline Aviation Fuel Antifreeze Solvents Used oil Reclaimable Fuel Hydraulic Fluids Transmission Fluid Batteries	Good housekeeping Maintenance operations are conducted on an impervious surfaces Hazardous materials and waste appropriately stored on secondary containment as required Maintenance performed indoors as much as possible Drip pans/trays used during maintenance activities Spill kits are kept on-site in close proximity to potential spill areas Personnel are trained in proper maintenance procedures and spill clean up methods Any spill will be cleaned-up immediately using dry clean up methods
Roadway Deicing, COS maintains airfield pavements	Pavement deicers (complex chlorides, sodium chloride)	Personnel are trained in proper material management and application methods prior to applying chemical deicers Storage piles covered

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Although other activities on Peterson AFB, such as the Army Air Force Exchange Service (AAFES) fueling station and Firestone Auto Care, involve vehicle maintenance and fueling, these areas are commercial in nature for installation personnel and do not directly support air transportation activities. Commercial activities that do not directly support air transportation or flight line activities are not regulated industrial operations under the National Storm Water Program. Thus these activities and facilities are not required to obtain permit coverage under the 2015 MSGP nor be included in this SWPPP. While these municipal activities are not specifically regulated under this permit and SWPPP, storm water protection at these facilities is addressed under different components of the Peterson AFB storm water program.

Evaluation of Unauthorized Non-Storm Water Discharges

Over the past 6 years, Peterson AFB personnel completed annual dry weather screening of all storm water outfalls and storm water control ponds were observed for the presence of non-storm water discharges. Appendix L contains dry weather screening reports including dates and results of evaluations. Unauthorized, non-storm water dry weather flow were not observed during these visual assessments.

Additionally, Peterson AFB has completed several studies of the base's sanitary and storm sewer systems. Though these assessments were not directly related to determining if sanitary or other wastewater sources were being inadvertently cross-connected to the storm water system, limited investigation by smoke and dye testing of select drains was accomplished to determine discharge location. No cross-connections were identified as part of these evaluations and locations that were evaluated appropriately discharged to the sanitary sewer system.

Allowable Non-Storm Water Discharges

The 2015 MSGP allows discharges from certain non-storm water sources, but these non-storm water discharges must be identified. The following non-storm water discharges are allowable under the 2015 MSGP:

- Discharges from fire-fighting activities,
- Fire hydrant flushings,
- Potable water, including water line flushings,
- Uncontaminated air conditioning or compressor condensate,
- Irrigation drainage,
- Landscape watering, provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling,
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed),
- Routine external building washdown that does not use detergents or hazardous cleaning products,
- Uncontaminated ground water or spring water,
- Foundation or footing drains where flows are not contaminated with process materials, and
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

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The following allowable non-storm water discharges may occur at Peterson AFB:

- Fire-fighting activities may occur anywhere on the installation. No specific BMPs are implemented for this allowable non-storm water discharge. Potential discharge location: Basewide
- Fire hydrants are flushed periodically as required for testing and water quality requirements. No specific BMPs are implemented for this allowable non-storm water discharge. Potential discharge location: Basewide
- Air condition condensates drain onto parking areas and grassy areas at multiple locations throughout the base. No specific BMPs are implemented for this allowable non-storm water discharge. Potential discharge location: Basewide
- Irrigation and landscape watering occurs throughout the installation. All pesticides, herbicides, and fertilizers are applied by trained and/or certified individuals according to manufacturer recommendations and product labeling. Sprinkler heads are positioned to minimize runoff and overspray onto non-landscaped areas. No additional BMPs are implemented for this allowable storm water discharge. Potential discharge location: Basewide

Run On from Adjacent Properties

In accordance with Paragraph 5.2.2 of the 2015 MSGP, the Peterson AFB SWPPT has identified and evaluated run off from adjacent properties for the potential to contribute significant quantities of pollutants of concern to storm water discharges from Peterson AFB. The COS maintains the airfield and a small portion of the airfield drains over land towards storm drain inlets that convey storm water to Peterson AFB Outfall 003. The COS owns these storm drain inlets and a small section of underground conveyance pipe leading from Peterson AFB to Outfall 003. It is possible for storm water from the COS to comingle with storm water discharges from Peterson AFB at Outfall 003; however, the Peterson AFB SWPPT has determined run off from the COS does not have the potential to contribute significant quantities of pollutants of concern to storm water discharges from Peterson AFB at Outfall 003. The following paragraph summarizes the evaluation used to make this determination and process for continual verification that run off from the COS does not contribute significant pollutants of concern to storm water discharges at Outfall 003.

The COS is an industrial facility regulated by the Colorado Department of Public Health and Environment (CDPHE). As such, the COS implements multiple BMPs related to air transportation industrial activities as required by CDPHE industrial storm water discharge permits. Peterson AFB has been performing monitoring of storm water discharges at Outfall 003 for more than 13 years in accordance with the Federal MSGP. During this time, no evidence of significant quantities of pollutants were observed discharging at Outfall 003, indicating there are no significant quantities of pollutants being discharged from Peterson AFB or from the small portion of the COS. Based on these factors, Peterson AFB determined during multiple SWPPP annual reviews and updates that there are not significant quantities of pollutants from the adjacent COS running onto the facility. If visual discharge monitoring indicates significant pollutants discharging at Outfall 003, Peterson AFB will investigate the source of pollution. Industrial pollution sources attributed to Peterson AFB would be noted on the visual inspection form, corrected, and SWPPP revised as necessary. If investigation indicates that significant quantities

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of pollutants are from the COS, Peterson AFB will coordinate with appropriate personnel at COS to correct the situation.

Sampling Data Summary

Industrial operations on Peterson AFB were previously authorized by the EPA under the 2000 MSGP which was administratively extended for Federal Facilities in Colorado until the issuance of the 2015 MSGP. Under the 2000 MSGP, Peterson AFB was only required to perform visual monitoring of storm water discharges. No storm water sampling was required to demonstrate compliance under the previous permit.

7.2 Storm Water Control Measures

The installation implements control measures to meet all applicable permit effluent limits. The categories of control measures include:

- Minimize exposure
- Good housekeeping
- Maintenance
- Spill prevention and response
- Erosion and sediment controls
- Management of runoff
- Salt piles
- MSGP sector-specific non-numeric effluent limits
- Employee training
- Non-storm water discharges
- Waste, garbage and floatable debris
- Dust generation and vehicle tracking of industrial materials

Installation control measures are further described in the Installation Supplement below, along with applicable additional state or local required categories measures.

Installation Supplement – Storm Water Control Measures

Storm water controls, or BMPs, are control measures that prevent or mitigate potential storm water pollution and protect water quality discharging from a facility. BMPs are a very broad class of measures that may include non-structural controls such as standard operating procedures, schedules of activities and prohibitions that govern operations at a facility and prevent storm water from contacting potential pollutants. BMPs also include structural devices such as secondary containment structures and treatment systems used to control leaks, manage storm water flow, and in some cases treat storm water prior to discharging. The following paragraphs discuss BMPs utilized at Peterson AFB to protect storm water and comply with the 2015 MSGP requirements. Appendix E contains additional information for BMPs used at each industrial facility on Peterson AFB.

Good Housekeeping and Minimize Exposure

Good housekeeping and minimize exposure BMPs are applicable to all industrial areas on Peterson AFB. Numerous Air Force policies and procedures dictate good housekeeping and material management practices that are rigorously enforced at all levels of management. Generally, good housekeeping and minimize exposure practices involve maintaining orderly

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work areas, minimizing use of chemicals and controlling exposure of pollutant sources to storm water. The following good housekeeping and minimize exposure measures are implemented at Peterson AFB.

- Aircraft, vehicle and equipment maintenance/repair activities are performed in work areas that are sheltered from precipitation to the maximum extent practical. Aircraft, vehicle, and equipment maintenance areas have containment structures that prevent migration of pollutants to areas susceptible to contacting storm water.
- Outdoor maintenance activities that involve use of lubricants, hydraulic fluid, or fuels are performed over drip pans or spill pads.
- Hazardous materials, including lubricants, solvents, paints, fuels and hydraulic fluids, are stored in containers or tanks that are kept closed when not in use. Containers or tanks containing hazardous materials are stored in areas protected from precipitation or in secondary containment structures. Storm water that accumulates in secondary containment structures is visually examined to ensure no contamination is present prior to discharge. If contamination is observed, the water in the secondary containment structure is collected and not discharged to the storm water system.
- Industrial work areas are kept clean, and incidental discharges of fluids or granular solids in work areas are promptly cleaned up using dry methods, containerized and properly disposed of off-site.
- Disposal of any rinse/wash waters or industrial materials into the storm water drain system is prohibited.
- Trash and solid wastes are placed in dumpsters or other authorized collection devices that are collected at regular intervals. Overflowing trash receptacles and loose trash and debris are not permitted on base.
- Work areas are regularly swept or vacuumed.
- All stored non-solid industrial materials (such as liquids and powders) that can be transported or dispersed via wind dissipation or contact with storm water are contained.
- Hazardous material inventories are tracked by the base Hazardous Materials Pharmacy (HAZMART), and these materials are supplied to the industrial areas on an as-needed basis. Excess inventory of hazardous materials are not managed outside the HAZMART storage area. Any excess inventory is given back to the HAZMART or properly disposed of off-site.
- Aircraft, vehicle, and equipment washing operations are conducted under cover and wash waters are discharged to the sanitary sewer system.
- Overstacking and unstable and disorderly arrangements of material and waste containers are not allowed in industrial or material storage areas. Damaged containers are not used to store hazardous materials or hazardous waste.
- Salt pile controls are in place and salt piles are located in a designated salt storage structure.

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Appendix E provides additional information pertaining to implementation of good housekeeping and minimize expose BMPs at each industrial facility/area.

Maintenance

The Maintenance Program includes activities to inspect, maintain and/or repair equipment, including structural control measures and the storm drainage system, to prevent or reduce pollution in the base storm water discharges. The Water Program Manager serves as the Maintenance Program coordinator for the base storm water system. Vehicle, equipment, and secondary containment structures/devices (such as curbs and spill pallets) are regularly inspected by facility personnel to identify any items that require maintenance or replacement to prevent releases to storm drains. Aboveground and underground storage tanks at Peterson AFB are inspected periodically by the Logistics Readiness Squadron (LRS) Fuels Management Office or tank custodian/user.

Elements of the Maintenance Program at Peterson AFB include:

- Identification and inspection of all equipment and systems used outdoors that may spill or leak pollutants. These are documented in Appendix E of this plan. Inspections are conducted periodically by facility personnel and corrective actions initiated if required.
- All government vehicles are inspected and documented prior to use as required by Air Force policy. Inspections are documented on Air Force Form 1800. Appropriate corrective action is initiated. The vehicle inspection and maintenance program is administered by the Logistics Readiness Squadron.
- Regular evaluation of identified equipment and systems in Appendix E to detect leaks or conditions that may result in the development of leaks. All identified equipment and systems have preventive maintenance requirements that are managed by the equipment owner. All equipment and systems throughout the base are being monitored on a regular basis, and visual evaluations are performed at least weekly.
- Inspection of storm water management devices, including oil water separators, catch basins, and permanent structural controls associated with industrial activities are accomplished at least semi-annually in conjunction with routine facility inspections. When inspection indicates maintenance is required, a work order or contact call order will be initiated as appropriate for the maintenance activity. Catch basins will be cleaned when the depth of debris reaches two-thirds of the sump depth and keeping the debris surface at least six inches below the lowest outlet pipe when feasible based on design and construction of the catch basin. Some catch basins on Peterson AFB are not equipped with sumps and outlet pipe is located at the bottom of the catch basin. In these situations, cleaning will be accomplished to minimize pollutant discharges and ensure system functionality.

Spill Prevention and Response

Peterson AFB has developed and implemented a Comprehensive Emergency Management Plan that details spill prevention and response procedures required for a Hazardous Materials Contingency Plan and Spill Prevention Control and Countermeasure (SPCC) Plan. The Comprehensive Emergency Management Plan provides detailed step-by-step descriptions for first responders to spills as well as training requirements for facility personnel and contractors who manage or handle hazardous materials and petroleum products. In addition, the Comprehensive

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Emergency Management Plan describes all necessary and appropriate spill response equipment and its location, and spill response equipment maintenance procedures. The Comprehensive Emergency Management Plan also includes inspection requirements for hazardous materials storage and handling areas, and requirements to report and address problems identified during inspections. The Comprehensive Emergency Management Plan provides specifications for training of personnel and contractors who handle hazardous materials and petroleum products in spill prevention and first response activities for spills and hazardous material emergencies. In accordance with the Comprehensive Emergency Management Plan, spills or other discharges of pollutants must be reported and entered into an electronic database for tracking purposes.

Sediment and Erosion Control

Peterson AFB has relatively flat topography which allows sediment and erosion to be controlled by structural and vegetative practices. Soils in the developed areas of the installation are protected by pavements, facilities, and landscaping. Storm water that falls in the developed areas of the installation is conveyed via a storm drainage system to the outfalls described in Section 2.0. Soils in the undeveloped areas of the installation are protected using vegetative stabilization. Landscape and vegetative areas in the industrial areas of the installation are most susceptible to sedimentation, dust generation, and erosion. These areas are maintained by the ground maintenance contractor. The grounds maintenance contract statement of work includes specifications to repair damaged areas where erosion has occurred or may occur, for replacement and regrading of damaged soil or ground cover materials, and reseeding or replacement of plants, where applicable. The statement of work specifies the requirements for preventive maintenance for vegetated areas, including fertilizer application, soil aeration, and removal and/or replacement of plants and trees.

Regulated construction activities (construction activities that disturb 1 one or more acres) performed on Peterson AFB require permit coverage under the Federal Construction General Permit by submitting a complete Notice of Intent (NOI) and Notice of Termination (NOT). Operators of these construction sites are required to obtain permit coverage, develop a construction site SWPPP, install and maintain BMPs, and comply with all conditions of the Federal Construction General Permit. Peterson AFB Contracting Officer Representatives (CORs) oversee construction activities, including oversight of the construction contractors storm water program. If deficiencies in the construction contractor's storm water program are identified, requests for corrective actions are sent to the contractor.

Salt Piles

Peterson AFB personnel perform pavement deicing of streets/parking lots to support airfield and aircraft operations. The COS performs snow and ice control on the runway and taxiways utilized by Air Force aircraft. Peterson AFB does manage snow and ice for the Peterson AFB aircraft parking area; however, deicing chemicals are not utilized for Peterson AFB airfield pavements. Roadways, parking lots, and other portions of Peterson AFB are deiced using industry standard roadway salts. The salt pile for this operation is located in a designated, covered storage structure as shown in Appendix E. Personnel are trained in all equipment operation and implement good housekeeping practices while transferring materials to minimize exposure.

Management of Runoff

The 2015 MSGP requires a description of storm water management practices and permanent structural control measures used to meet established effluent limits. Storm water runoff on Peterson AFB is primarily conveyed through a piping and open channel flow network to the

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outfalls previously discussed. The following paragraphs discuss additional structural control measures associated with the Peterson AFB outfalls.

- Pond 3 is located on the south end of the golf course. Pond 3 receives storm water from a large portion of Peterson AFB, including most of the storm water associated with industrial activity. Storm water conveyed to Pond 3 is pumped to Pond 1 and Pond 2 on the Peterson AFB Golf Course. Water that is not used by the golf course is allowed to evaporate. Pond 3 is equipped with an overflow spillway that discharges to the COS Detention Pond No. 2 from Outfall 004 whenever Pond 3 is full.
- Outfall 002 is equipped with manually operated slide gates that are used to control storm water flows. The slide gates can also be used to contain any large spills that may occur in the outfall drainage area.
- COS Detention Pond No. 2 receives storm water discharges from Peterson AFB Outfall 005 and overflow from Pond 3. COS Detention Pond No. 2 allows storm water to infiltrate, evaporate, and discharge at a controlled rate through the COS conveyance system.

Airport Fuel System and Fueling Areas

Fueling operations are conducted at various locations on Peterson AFB. Aircraft fueling is conducted primarily by mobile refueling trucks. Aircraft refueling trucks are parked in a designed location at the POL Yard when not actively fueling aircraft. Jet fuel is delivered via commercial tanker trucks and off-loaded to the aboveground storage tanks in the POL Yard. Fuel from the storage tanks is transferred to the mobile aircraft refueling trucks as needed. During certain aircraft maintenance activities, fuel is off-loaded from the aircraft into storage bowzers or tanks. Small aircraft, primarily associated with the Aero Club, are fueled from an underground storage tank and dispensing system located on the southeast portion of the flightline, near Building 104.

Ground vehicles are fueled at the Military Service Station. This facility has two fuel pumps and four storage tanks. Standard operating procedures have been established for fuel transfers. Spill response equipment is available to clean up any minor spills. Larger spills from fuel transfers would flow into a trench drain which is connected to the storm sewer system. There is a control valve at the connection to the storm sewer system that can be closed to prevent the discharge of any spilled materials.

Personnel responsible for fueling operations are trained in proper fueling operations, spill prevention and spill response. Spill kits are available at all fueling locations. Drip pans and trays are utilized when appropriate to contain any leaks that may occur during fueling operations.

Aircraft, Ground Vehicle, and Equipment Cleaning Areas

Aircraft, ground vehicles, and support equipment are required to be washed periodically as part of preventive maintenance programs to prevent corrosion, ensure proper equipment operation, and extend equipment life. All aircraft, ground vehicle and equipment cleaning activities are conducted in designated areas. The following facilities are designed cleaning areas:

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- Aircraft are cleaned in hangars on the flightline. All aircraft washing activities are conducted inside of the designated facilities. Wash water is collected by floor drains, conveyed to an oil/water separator and discharged to the sanitary sewer system.
- Most ground vehicles owned by the government are cleaned at the Government Vehicle Wash Rack facility. The wash facility is under cover and all wash waters are collected, conveyed to an oil/water separator and recycled or discharged to the sanitary sewer.
- Heavy equipment (snow plows, graders, sweepers) are stored and washed at the Civil Engineer Squadron Heavy Equipment Facility. All washing activities are conducted indoors. Wash waters are collected in floor drains, conveyed to an oil/water separator and discharged to the sanitary sewer system.
- Aerospace Ground Equipment cleaning is accomplished in designated hangars near the flightline. Equipment washing at both facilities is conducted indoors and all wash water is collected in floor drains, conveyed to an oil/water separator and discharged to the sanitary sewer.
- Aircraft engine cleaning is conducted outdoors by the 302nd Airlift Wing Propulsion Maintenance Shop. All wash water generated during aircraft engine washing is contained and brought transported to the Propulsion Maintenance Shop for treatment and discharge into the sanitary sewer.

Aircraft, Ground Vehicle, and Equipment Maintenance and Storage Areas

Lubricants, solvents, cleaners, aqueous film forming foam (AFFF), acids, and various vehicle and aircraft fluids are used extensively within the maintenance facilities at Peterson AFB. The following is a list of BMPs that have been implemented at these facilities to prevent storm water pollution.

- The Air Force has established pollution prevention and green procurement program to substitute non-toxic or less toxic cleaners.
- All containers of hazardous materials and hazardous wastes are maintained in good condition, stored either inside, under cover, and/or over secondary containment, and appropriately labeled with the container contents.
- Detailed chemical inventories and safety data sheets (SDS) are available at each maintenance facility, and only authorized chemicals are allowed and issued to each facility by the central chemical pharmacy, or HAZMART.
- Dry clean up techniques are used within maintenance areas.
- Drip pans and other portable secondary containment devices are used for maintenance and repair activities where there is potential for fluid losses from vehicles, equipment, and/or aircraft.
- Floor drains in maintenance and wash areas are connected to sanitary sewer system.
- Spill pallets, CONEX cabinets, and storage lockers are used indoors and outdoors to store liquid products and liquid waste.

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Aircraft Deicing Operations

Deicing of Air Force aircraft is governed by Air Force wide and aircraft specific technical orders. These technical orders list approved deicing chemicals, physical removal methods, and application techniques that must be used at Peterson AFB. Peterson AFB uses propylene glycol based aircraft deicing fluid as an environmentally friendly substitute to ethylene glycol based deicing fluids. Aircraft deicing fluid is stored in aboveground storage tanks with secondary containment. The Material Safety Data Sheet for the deicing fluid used at Peterson AFB is provided in Appendix E of this SWPPP.

Aircraft deicing operations are conducted on the aircraft parking apron as-needed to meet mission requirements. Mobile deicing trucks are used to apply deicing fluid which is mixed at a 50/50 fluid to water ratio. Peterson AFB has implemented numerous source reduction BMPs to reduce the amount of aircraft deicing fluid used and potentially exposed to storm water including: physical removal of accumulated snow prior to deicing, forced-air deicing, operator training, indoor parking when available and enclosed cab deicing trucks.

There is no dry weather discharge of aircraft deicing fluid from Peterson AFB. Deicing fluid that accumulates on pavement surfaces below the aircraft remains in place. Residual deicing fluid that accumulates on the pavement surface will biodegrade over time and may be transported via storm water runoff to vegetative areas that surround the parking apron and into COS Detention Pond No. 2 through Outfall 005. Due to the small amount (less than 10,000 gallons) of deicing fluid used per year at Peterson AFB, managing runoff from deicing areas by diverting the runoff to vegetative swales/ponds was selected as an appropriate BMP.

Peterson AFB uses only physical snow removal methods for airfield pavements. No additional storm water BMPs are required for airfield pavement operations at Peterson AFB.

Airfield Deicing Operations

The COS is responsible for maintaining the runways and taxiways used by Peterson AFB, including application of airfield deicing chemicals. Peterson AFB does perform snow and ice control operations on the aircraft parking areas and physical removal methods are typically used. Peterson AFB does not stage or utilize airfield deicing chemicals, such as potassium acetate for airfield snow and ice deicing. If the use of airfield deicing chemical becomes a requirement for Peterson AFB, additional BMPs will be implemented as required.

7.3 Schedules and Procedures for Monitoring

The installation implement procedures for conducting the following types of monitoring, as necessary:

- Benchmark monitoring
- Effluent limitations guidelines monitoring
- State or Tribal specific monitoring
- Impaired waters monitoring
- Other monitoring as required

At a minimum, procedures describe:

- Locations where samples are collected
- Pollutant parameters sampled
- Monitoring schedules

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- Numeric limits, where applicable
- Sample collection and analysis

Monitoring procedures are documented in the Installation Supplement below.

Installation Supplement – Schedules and Procedures for Monitoring

The 2015 MSGP requires the implementation of various monitoring programs to review the facility's operations, storm water program and controls, and compliance with the permit conditions. The following paragraphs discuss these monitoring requirements and implementation at Peterson AFB.

Benchmark Monitoring

The 2015 MSGP requires certain industries and permittees to accomplish benchmark monitoring of storm water discharges. Benchmark monitoring, unlike quarterly visual monitoring, requires chemical analysis of storm water discharges for specific pollutants of concern. The permit establishes specific benchmark concentrations for specific pollutants, which are not enforceable limitations, but provide an indication of the effectiveness of a facility's storm water program. If analytical results for a specific parameter exceed established benchmark values, the facility is not in violation of permit conditions, but the exceedance does indicate additional storm water controls maybe needed to protect water quality. However, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Paragraph 8.S.6, Sector S Air Transportation of the 2015 MSGP does contain benchmark values for biochemical oxygen demand, chemical oxygen demand, ammonia and pH; however, only air transportation facilities that use more than 100,000 gallons of aircraft deicing chemicals and/or 100 tons of urea are required to complete benchmark monitoring. Peterson AFB currently does not use more than 100,000 gallons of aircraft deicing fluid or more than 100 tons of urea, so benchmark monitoring is not currently required.

Impaired Waters Monitoring

The waters receiving discharge from Peterson AFB are considered impaired for E.coli, with no established TMDL. Per Paragraph 6.2.4.1 of the 2015 MSGP, annual monitoring of outfalls is required to determine the presence of pollutants contributing to water quality impairments. The annual impaired waters outfall monitoring is presented in Table 2.

Table 2
Impaired Waters Monitoring

Outfall	Drainage Basin	Parameter(s)
001	East Fork of Sand Creek	E.coli
002	East Fork of Sand Creek	E.coli
003	East Fork of Sand Creek	E.coli
004	COS Detention Pond, Unnamed Tributary of Fountain Creek	E.coli
005	COS Detention Pond, Unnamed Tributary of Fountain Creek	E.coli

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Impaired waters monitoring will be accomplished under the supervision of the SWPPT Leader using the following basic procedures:

- Obtain sampling kit from the analytical laboratory (bottles, cooler for shipping, preservatives, etc.);
- Collect grab sample at the final outfall according analytical method procedures;
- Follow proper preservation techniques and ship to testing laboratory for analysis using 40 CFR Part 136 approved analytical methods performed by the selected analytical laboratory;
- Review analytical results; and
- Assess BMPs or processes for possible modification or corrective action if results indicate storm water may be contributing to the impairment of receiving waters

Monitoring must be performed within 30 minutes of the start and no later than one hour after runoff or snowmelt begins discharging from the facility. The monitoring will be performed during storm events with at least 0.1 inch of precipitation at least 72 hours after the previous precipitation event. Collected samples will be analyzed at a qualified laboratory using only 40 CFR Part 136 analytical methods. The results of the monitoring shall be included in Appendix G of this SWPPP.

Monitoring may be discontinued after monitoring results demonstrate that Peterson AFB is not discharging the pollutant causing the water quality impairment or the pollutants presence is caused solely by natural background sources. In either case, the decision to discontinue annual monitoring will be accompanied by the appropriate documentation and retained in Appendix G.

Monitoring Schedules and Logistics

The schedule and logistics, including laboratory, SWPPT Member participant, and/or contractor support selection, for each type of monitoring discussed in this section will be established by the SWPPT throughout the course of the year and as weather dictates. All monitoring required on a quarterly basis will be performed according to the following basic schedule, provided adequate storm events occur:

- Quarter 1: 1 January through 31 March
- Quarter 2: 1 April through 30 June
- Quarter 3: 1 July through 30 September
- Quarter 4: 1 October through 31 December

All analytical monitoring results must be reported to EPA using their electronic NetDMR tool no later than 30 days after you have received the complete laboratory results for all monitoring outfalls for the reporting period.

7.4 Inspections

The installation implements procedures for conducting the following types of inspections, as necessary:

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- Routine facility inspections
- Quarterly visual assessment of storm water discharges
- Comprehensive site inspections

At a minimum, procedures include:

- Person(s) or position(s) responsible for inspection
- Schedules for conducting inspections
- Specific items to be covered by the inspection

All other inspections are conducted IAW AFI 90-201, *Air Force Inspection System* and the Commander's Self Inspection Program. Inspection procedures are documented in the Installation Supplement below.

Installation Supplement – Inspections

In accordance with the 2015 MSGP, Peterson AFB must conduct quarterly routine facility inspections during normal operating hours. The quarterly facility inspections must be completed by qualified personnel from Peterson AFB or by a consultant hired by Peterson AFB, with at least one member of the inspection team comprised of a member of the SWPPT. Quarterly facility inspections will consider the results of visual and analytical monitoring for the previous year when planning and conducting inspections. Furthermore, at least one of the quarterly inspections must be accomplished during a period when storm water discharge is occurring. Quarterly facility inspections will be accomplished based on a calendar year quarter.

The routine facility inspection team will assess the conditions at the facility to determine if any operational changes have occurred that may require implementation of storm water controls; assess the effectiveness of existing storm water controls; and identify maintenance requirements for established storm water controls. In accordance with the 2015 MSGP Paragraph 3.1, the inspections must include all of the following areas:

- Areas where industrial materials are exposed to storm water;
- Areas identified in this SWPPP and potential pollutant sources;
- Areas where spills and leaks have occurred within the past 3 years;
- Control measures, and
- Discharge points.

During the inspection the team will examine or look out for the following:

- Industrial materials, residue or trash that may have or could come into contact with storm water;
- Leaks or spills from industrial equipment, drums, tanks and other containers;
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
- Control measures needing replacement, maintenance or repair.

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During those facility inspections taking place during a storm water discharge, control measures will be observed to ensure they are functioning correctly. Discharge points will also be visually inspected. If discharge locations are inaccessible due to storm water discharge, nearby downstream locations will be inspected instead.

Each routine facility inspection will be documented in accordance with Paragraph 3.1.2 of the 2015 MSGP. Inspection summaries will contain all findings, including but not limited to, the following information:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information;
- All observations relating to the implementation of control measures, including:
 - A description of any discharges occurring at the time of the inspection;
 - Any previously unidentified discharges and/or pollutants from the site;
 - Any evidence of, or the potential for, pollutants entering the drainage system;
 - Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water; and
 - Any control measures needing maintenance, repairs, or replacement.
- Any additional control measures needed to comply with the permit requirements; and
- Any incidents of noncompliance observed.

At the completion of each routine facility inspection, housekeeping or maintenance issues identified will be provided to the Peterson AFB Water Quality Program Manager for corrective action. The results of the routine facility inspection shall be included in Appendix I of this SWPPP.

Based on the results of the routine facility inspections, Peterson AFB must implement corrective actions and potentially modify this SWPPP as described in Section 4.0 of this SWPPP. If the inspection identifies BMPs that need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event (if practicable), but not more than 45 days after completion of the inspection.

Monthly Facility Inspections during Deicing Season

In accordance with the 2015 MSGP, Paragraph 8.S.6, routine facility inspections will be performed monthly during deicing season. Deicing season is defined as October through April for Peterson AFB.

Quarterly Visual Monitoring

Paragraph 3.2 of 2015 MSGP requires all permitted facilities to perform quarterly visual monitoring of storm water discharges associated with industrial activity from each outfall, or from a representative outfall for substantially similar outfalls. There are eight storm water outfalls associated with industrial activities on Peterson AFB that must comply with quarterly visual monitoring requirements. Outfalls 1A, 1B, 1C, and 1D are considered substantially similar and quarterly visual monitoring will be accomplished at one of these outfalls on a rotating basis. Peterson AFB will rotate the monitored representative outfall on an annual basis.

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The visual monitoring of industrial storm water outfalls must be accomplished during day light hours, during normal facility working hours. The visual monitoring will include an examination for color, odor, clarity, presence of floating, suspended or settled solids, foam, oil sheen and other obvious indications of storm water pollution. Figure 3 shows the visual monitoring report form that will be used to document the results of quarterly visual monitoring at Peterson AFB.

Each quarterly monitoring event must be performed within 30 minutes of the start of and no later than one hour after runoff or snowmelt begins discharging from the facility. The monitoring will be performed during storm events with at least 0.1 inch of precipitation at least 72 hours after the previous precipitation event. If no qualifying storm events occur within a given quarter, a statement that no events occurred will be certified and maintained in Appendix G and the monitoring will be performed during the next qualifying storm event. All efforts will be made to collect the requisite four sets of samples annually from the designated outfalls.

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Storm Water Discharge Quarterly Visual Monitoring Reporting Form	
Outfall #	
Date and Time of Sample Collection	
Date and Time of Visual Assessment	
Duration of Storm Event	
Rainfall measurement for storm	
Duration since previous measurable (>0.1 inches) storm event	
Estimate of total volume (in gallons) of discharge sample	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids	
Suspended Solids	
Foam	
Oil Sheen	
Other Obvious Pollution Indicators	
Probable Sources of Pollution, if any	
Maintenance Required (State Nature)	
Signature of Person Conducting Visual Storm Water Monitoring: _____	

**Figure 3
Outfall Monitoring Report Format**

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At the completion of each visual monitoring event, housekeeping or maintenance issues identified will be provided to the Peterson AFB Water Program Manager for corrective action. The results of the inspection and documentation of corrective actions shall be included in Appendix J of this SWPPP.

Based on the results of the visual monitoring, Peterson AFB must modify this SWPPP within 14 days calendar days following the completion of the monitoring, if necessary. If the monitoring identifies that BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event (if practicable), but not more than 45 days after completion of the inspection.

Corrective Actions

As required by Part 4 of the 2015 MSGP, the following conditions require implementation of Corrective Actions:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another NPDES permit to a water of the U.S.
- A discharge violates a numeric effluent limit.
- Control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in this permit.
- A required control measure was never installed, was installed incorrectly, or not in accordance with Parts 2 and/or 8 of the MSGP, or is not being properly operated or maintained.
- A visual assessment shows evidence of storm water pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

Any corrective actions, as identified during any facility investigation or monitoring activity, shall be immediately implemented to minimize or prevent the discharge of pollutants from Peterson AFB. Once a corrective action is identified, Peterson AFB shall take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational. In terms of the MSGP, immediately is defined as the same day the problem is identified. If a problem is identified at a time in the work day when it is too late to initiate corrective action, the initiation of corrective action shall begin on the following work day.

If additional changes are needed beyond those that can be immediately implemented, Peterson AFB will attempt to install a new or modified control and make it operational, or complete the repair, before the next storm event if possible, and within 14 calendar days from the time of discovery. If it is not feasible to complete the installation or repair within 14 calendar days, documentation will be generated to detail why the installation or repair could not be completed within the 14-day timeframe. The schedule for completing the work will be identified, and all work should be done as soon as practicable but no longer than 45 days after discovery. If implementation of the Corrective Action will exceed 45 days, Peterson AFB personnel must notify EPA Region 8 of the intention to exceed 45-days.

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All corrective actions will be documented within 24 hours of discovering the issue. Records of all corrective actions will be retained in Appendix J. Corrective action records will include the following, at a minimum: identification and description of the condition triggering the need for corrective action: date, the immediate and subsequent corrective actions taken, and the dates when each corrective action was initiated and completed. Corrective action reports must be certified by a duly authorized individual. When corrective actions result in changes to any of the controls or procedures, this SWPPP will be updated within 14 calendar days.

7.5 Documentation to Support Eligibility Considerations Under Other Laws

Where applicable, the installation maintains documentation supporting determination of eligibility under other federal laws (Endangered and Threatened Species and Critical Habitat Protection, Historic Properties Preservation and/or NEPA) or host nation laws separately from this SWPPP. Such documentation is available through the References section or as appendices below.

Installation Supplement – Documentation to Support Eligibility

Documentation of Permit Eligibility Related to Endangered Species

Paragraph 1.1.4.5 of the 2015 MSGP provides five possible criteria related to eligibility for coverage under the MSGP with respect to endangered species and critical habitat protection. Peterson AFB has selected Criterion C as the appropriate criteria in accordance with Paragraph 1.1.4.5 and procedures outlined in Appendix E of the 2015 MSGP. Appendix C of this SWPPP contains additional documentation of permit eligibility related to endangered species and selection of Criterion C.

Documentation of Permit Eligibility Related to Historic Places

Paragraph 1.1.4.6 of the 2015 MSGP provides four possible criteria related to eligibility for coverage under the MSGP with respect to historic property protection. No historic or eligible properties will be impacted by industrial storm water discharges. Additionally, Peterson AFB does not plan to construct new storm water controls to meet the effluent limitations required by the MSGP. Peterson AFB has an established Integrated Cultural Resources Management Plan (ICRMP) and future development activities on the installation will comply with this plan as well as historic property review requirements of the Construction General Permit for projects greater than 1 acre in size or part of a common plan of development that will cumulatively disturb more than 1 acre.

8.0 REFERENCES

Standard References

(Applicable to all AF Installations)

- Federal Water Pollution Control Act (Clean Water Act)
- AFI 32-1067, Water and Fuel Systems
- AFI 32-1002, Snow and Ice Control
- AFI 32-7001, Environmental Management
- AFI 90-201, Air force Inspections System
- Water Quality Program Management Playbook
- AFLOA Water Quality Legal and Other Requirements

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- [eDASH Water Quality Program Page](#)
- [eDASH Training Matrix](#)
- [ADLS](#)
- [EASI](#)
- [Water Enterprise Tracker](#)

Installation References

- 2015 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP), 4 June 2015
- Peterson AFB eDASH site and associated support, current plans (SPCC Plan, INRMP, etc)

9.0 ACRONYMS

Standard Acronyms

- [eDASH Acronym Library](#)
- [Water Quality Playbook Acronym Section](#)
- [U.S. EPA Terms and Acronyms](#)

10.0 DEFINITIONS

Standard Definitions

- [Water Quality Playbook Definition Section](#)

APPENDICES